

Work Order ID 84077

Wednesday, May 02, 2012 1:06:30 PM

*shy May 15*  
**\*84077\***

Page 1

Item ID: D3690-041

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Glareshield Assembly

Start Date: 5/2/2012 Start Qty: 4.00

**\*4\***

Cust Item ID:

Required Date: 5/8/2012 Req'd Qty: 4.00

**\*4\***

Customer:

Reference:

Approvals: Process Plan: */* Date: *1205-2* Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3690	Rev C

100 Pick Kit 0.00

**\*100\***

Packaging

Memo

0.00

Packaging

*2* *Ø* *FF*  
*12-05-10*

110 Small Fab 0.00

**\*110\***

Small Fab

Small Fab

Memo

0.00

Small Fab

1- transfer drill D3697-041 and D3698-1 in D3690-1 and assemble as per dwg D3690

2- scribe batch # and part # as per dwg

*2* *Ø* *FF*  
*12-05-10*

120 QC5- Inspect part completeness to step on W/O 0.00

**\*120\***

QC

Memo

0.00

Quality Control

*(2)* *W* *W* *12-05-10*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 84077

**\*84077\***

Page 2

Wednesday, May 02, 2012 1:06:30 PM

Item ID: D3690-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Glareshield Assembly  
 Start Date: 5/2/2012 Start Qty: 4.00 **\*4\*** Cust Item ID:  
 Required Date: 5/8/2012 Req'd Qty: 4.00 **\*4\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	SprayPaint	0.00							
<b>*130*</b>									
SprayPaint	Memo	0.00							
Spray Painting	1- Mask hatched areas (6 pls) on inside of the part prior to painting as per dwg								
	2-Paint D3690-041 assy flat black using Basf Glasurit 22 Line code SFA39.50 per Dart QSI 005 4.2								
	Primer 121202								
	Paint 121202								
140	QC14- Inspect Spray Paint	0.00							
<b>*140*</b>									
QC	Memo	0.00							
Quality Control									
150	Identify as per dwg & Stock Location: _____	0.00							
<b>*150*</b>									
Packaging	Memo	0.00							
Packaging									

12-5-11 (2)

(2) NW 12-05-14

2 8/5/14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

**Work Order ID 84077****\*84077\***

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Wednesday, May 02, 2012 1:06:30 PM

Item ID: D3690-041      Accept      **\*N900040100\***      Setup Start **\*NS1\***  
Revision ID:      Stop **\*NS2\***  
Item Name: Glareshield Assembly  
Start Date: 5/2/2012      Start Qty: 4.00      **\*4\***      Cust Item ID:  
Required Date: 5/8/2012      Req'd Qty: 4.00      **\*4\***      Customer:  
Reference:

Approvals:      Process Plan:      Date:      Tooling:      Date:      Run Start **\*NR1\***  
QC:      Date:      SPC (Y/N):      Date:      Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC21- Final Inspection - Work Order Release	0.00							
<b>*160*</b>									
QC	Memo	0.00							
Quality Control									

ME 12-05-14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Wednesday, May 02, 2012 1:06:34 PM

**\*84077\***

**\*D3690-041\***

**Start Date:** 5/2/2012

**Required Date: 5/8/2012**

**Start Qty: 4.00**

**Required Qty: 4.00**

<b>Comments:</b>	IPP Rev:A	08-04-29	new issue	DD	verified by:ec
	IPP Rev:B	08-07-14	revB as per dwg	DD	verified by:ec
	IPP Rev:C	08-09-08	added painting	DD	verified by:EC
	IPP Rev:D	08-10-07	revC as per dwg	DD	verified by:EC

[illegible]

W/O:		WORK ORDER CHANGES					
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**NOTE:** Date & initial all entries



# Picklist Print

Page 2

Wednesday, May 02, 2012 1:06:34 PM

Work Order ID: 84077

**\*84077\***

Parent Item: D3690-041

**\*D3690-041\***

Parent Item Name: Glareshield Assembly

Start Date: 5/2/2012

Required Date: 5/8/2012

Start Qty: 4.00

Required Qty: 4.00

D3698-1

Manufactured No

Each

3.0000

4

**\*D3698-1\***

Support Angle

\*\*

(2) FF 12-05-10

Location

Loc Qty

Loc Code

ST241A

3

59244

3

2

MS20426AD3-5

Purchased

No

Each

12,402.00

8

**\*MS20426AD3-5\***

Rivet

\*\*

(2) FF 12-05-10

Location

Loc Qty

Loc Code

ST316

12402

4179

588

4444

5654

4533

6160

4

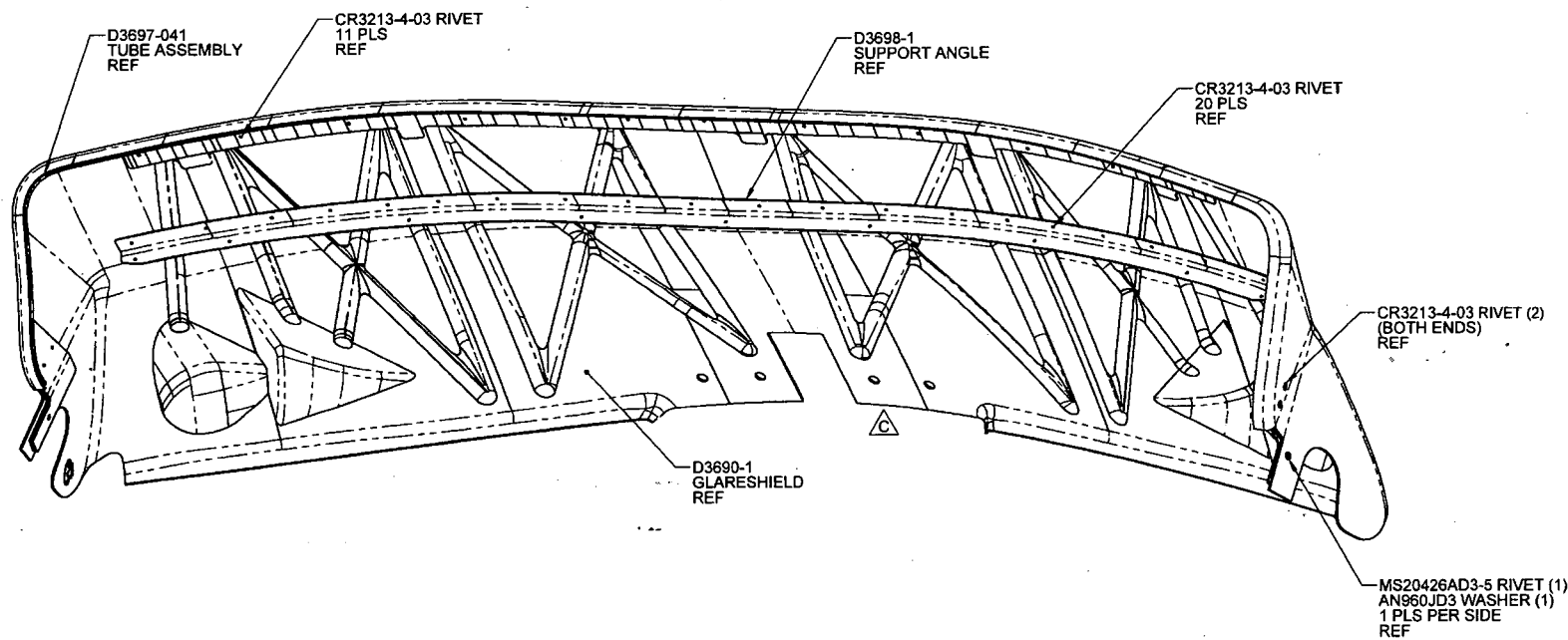
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**RELEASED**  
28-09-16/17

**PART LIST**

QTY -041	PART NUMBER	DESCRIPTION
X	D3690-041	GLARESHIELD ASSEMBLY
1	D3690-1	GLARESHIELD
1	D3697-041	TUBE ASSEMBLY
1	D3698-1	SUPPORT ANGLE
2	AN960JD3	WASHER (OR NAS1149DN332J)
2	MS20426AD3-5	RIVET
35	CR3213-4-03	RIVET

**D3690-041 GLARESHIELD ASSEMBLY**

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 84077

REV.	DESCRIPTION	BY	DATE
C	SHEET 1 PL MS20426AD3-5 RIVET WAS MS20426AD3-4, CR3213-4-03 RIVET WAS MS20470AD3-4, WASHER QTY WAS 6 (VIEWS UPDATED ACCORDINGLY). RIVETS ON SHEET 1 CHANGED TO REF QTY. RIVETS ON SHEET 2 CHANGED TO "HARD" CALLOUTS. SHADING REMOVED FROM ALL VIEWS FOR CLARITY.	AJS	08.09.02
B	ADD FINISH COAT & 1.0 TYP. SHEET 2 ZONES A, 8 & C, 5; ADD MIN THICKNESS. SHEET 3 ZONE A, 8	RF	08.08.24
A	NEW ISSUE	RF	08.05.26
DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA DRAWING NO. <b>D3690</b> REV. C TITLE <b>GLARESHIELD ASSEMBLY</b> SCALE <b>NTS</b>	
DRAWN	RF		
CHECKED	<i>[Signature]</i>		
MFG. APPR.	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DE APPR.	<i>[Signature]</i>		
DATE	08.09.02	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

*11-05-2*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

8 7 6 5 4 3 2 1

TRANSFER DRILL  $\phi 0.128$   
FROM D3698-1 TO D3690-1  
INSTALL  
CR3213-4-03 RIVET, 20 PL  
RIVET HEAD ON GLARESHIELD  
OUTSIDE SURFACE

D3690-1  
GLARESHIELD  
REF

TRANSFER DRILL  $\phi 0.098$   
FROM D3697-041 TO D3690-1  
INSTALL  
MS20426AD3-5 RIVET  
AN960JD3 WASHER (ON GLARESHIELD  
OUTSIDE SURFACE)  
1 PER SIDE

TRANSFER DRILL  $\phi 0.128$   
FROM D3697-041 TO D3690-1  
INSTALL  
CR3213-4-03 RIVET 2  
BOTH ENDS

0.14  
REF

D3697-041  
TUBE ASSEMBLY  
REF

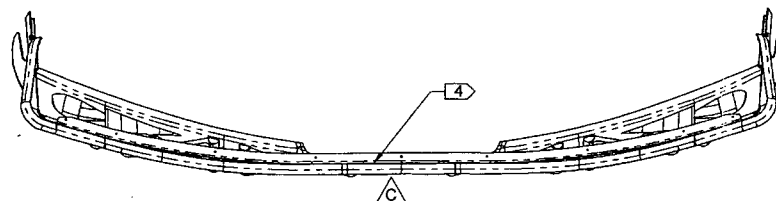
TRANSFER DRILL  $\phi 0.144$   
AT THIS LOCATION  
FROM D3697-041 TO D3690-1  
(NO HARDWARE INSTALLED)

D3698-1  
SUPPORT ANGLE  
REF

TRANSFER DRILL  $\phi 0.128$   
FROM D3697-041 TO D3690-1  
INSTALL  
CR3213-4-03 RIVET, 11PL  
RIVET HEAD ON GLARESHIELD  
OUTSIDE SURFACE

EQUAL DIMENSION  
AT BOTH ENDS

SECTION A-A



D3690-041 GLARESHIELD ASSEMBLY

841077

RELEASED  
08-09-17

NOTES:

- 1) CENTER D3697-041 AND D3698-1 ON TO D3690-1
- 2) FINISH: PAINT D3690-041 ASSY FLAT BLACK USING BASF GLASURIT 22 LINE CODE SFA39.50 PER DART QSI 005 4.2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) IDENTIFICATION: ETCH WITH DART P/N D3690-041 & B/N ON INSIDE OF PART
- 5) WEIGHT: 2.98 lbs
- 6) MASK HATCHED AREAS (6 PLS) ON INSIDE OF THE PART PRIOR TO PAINTING

DESIGN	IRF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3690	SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.		GLARESHIELD ASSEMBLY	NTS
DATE	08.09.02	COPYRIGHT © 2008 BY DART AEROSPACE LTD	
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8 7 6 5 4 3 2 1

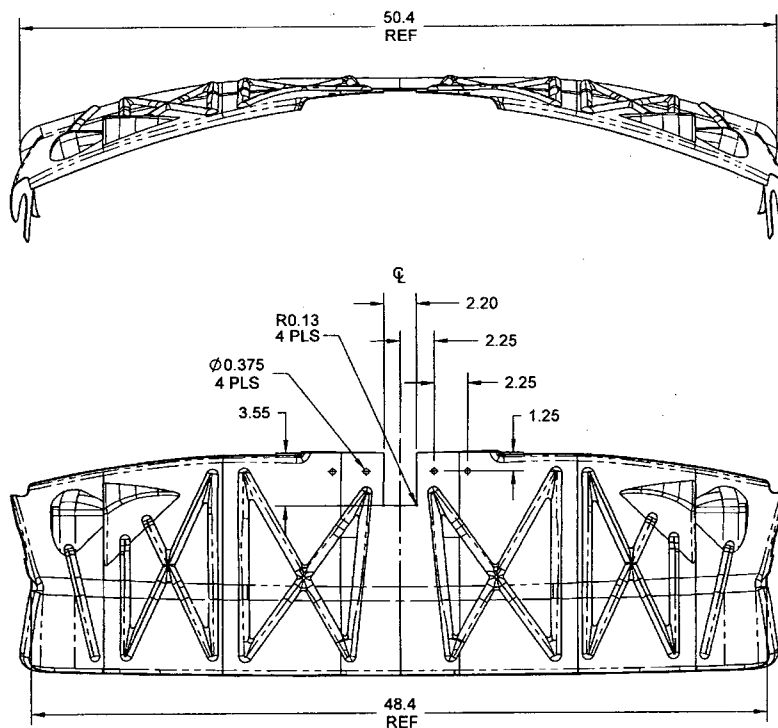
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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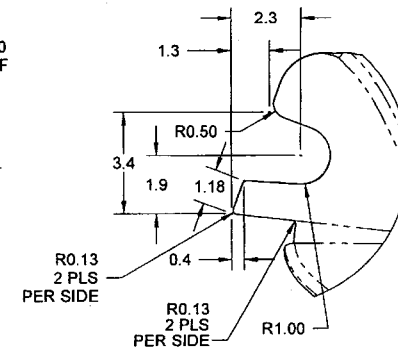
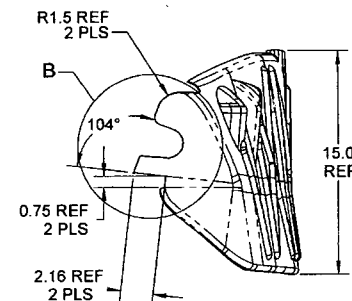


**D3690-1 GLARESHIELD**

**NOTES:**

- 1) MATERIAL: F6006 SUEDE/POLISHED 701 BLACK FLAT LEXAN SHEET 0.093 THICK  
(REF DART SPEC MLEXS.093-F6006-02)
- 2) TOOLING: THERMOFORM PER MOLD DT9010 PER QSI 022  
TRIM PER MOLD SCRIBE LINES EXCEPT WHERE NOTED
- 3) FINISH: NONE
- 4) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: NONE
- 8) WEIGHT: 2.5 lbs
- 9) MINIMUM THICKNESS AFTER FORMING IS 0.040

84077



**RELEASED**  
08.09.02

**DETAIL B**  
SCALE 2X  
THIS VIEW FOR REFERENCE ONLY

DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO. <b>D3690</b>	REV. C
MFG. APPR.		TITLE <b>GLARESHIELD ASSEMBLY</b>	SCALE NTS
APPROVED		COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DE APPR.			
DATE	08.09.02		

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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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